

Project Summary:

The CNAPS Development Environment consists of several software tools required by the software developer. These are:

- CNAPS application program interface
- CNAPS-C compiler
- CNAPS assembler
- CNAPS source-level debugger (command-line interface)
- CNAPS source-level debugger (graphical interface)

Initial porting of the first three tools was completed in Phase 1. Phase 2 tasks include the porting of the remaining two tools as well as enhancing the first three tools to integrate them with the source-level debugger.

Effort on the Phase 2 tasks has commenced and good progress has been made during this reporting period. The CNAPS compiler, assembler, and application program interface have been enhanced to integrate with the source-level debugger. The source-level debugger with a command-line interface has been ported to the Windows 3.x environment and is undergoing testing and bug fixing.

At the time of this report, the project has been authorized to spend \$292,215.00 for the Phase 2 tasks. The contract stipulates \$492,893.00 are required for the completion of the Phase 2 tasks, therefore, an additional \$200,678.00 of funding must be authorized to complete the Phase 2 tasks.

Description of Progress:

The previous Project R&D Status Report stated the following as the objectives for this reporting period:

During the next three months work will begin on Phase 2 of the contract and the following are expected to be achieved:

- 1. Porting of the CodeNet Software Development environment to Windows/NT will begin.*
- 2. Porting of the Control software to Windows/NT will begin. This will allow applications to execute CNAPS code on the CNAPS/PC board within the Windows/NT environment.*
- 3. Complete Beta testing of the CNAPS/PC board and the CNAPI-PC Control software and move them into production.*

The following sections discuss the specific progress made in this reporting period in the hardware and software areas towards the stated objectives.

Hardware**Testing:**

Beta testing of the CNAPS/PC board has continued. It has been found that there is a high likelihood of incompatibility between the CNAPS/PC board and an end-user's PC system hardware. This incompatibility is caused by different PC motherboard vendor's method of implementing the ISA bus and Adaptive Solutions' ISA bus interface

on the CNAPS/PC board.

Because of this incompatibility, Adaptive Solutions has decided to change the method of mapping the CNAPS/PC board into the ISA bus memory map. This will require modifications to be made to existing CNAPS/PC boards. A test version of the modified CNAPS/PC board has been implemented and is undergoing test.

Software

Design and Implementation:

Due to the slow acceptance in the marketplace of Windows/NT as a software development platform, Adaptive Solutions has decided that Windows 3.x is the more appropriate platform for its CNAPS Software Development environment. Therefore, the Phase 2 tasks are being focused on providing a set of software development tools that are 32-bit oriented, meet the Win32s standards, and are usable in the Windows 3.x environment. Because Windows/NT allows the execution of programs that have been developed for NT as well as Windows 3.x (meet the Win32s standard) the tools being developed under this contract will be usable in both environments.

Initial port and implementation of the command-line version of the source-level debugger has been completed. This version of the debugger has been integrated with the CNAPS-C compiler and the CNAPS assembler. This preliminary version of the source-level debugger has been made available to several testers while the more advanced features of the debugger are being ported and/or implemented.

Initial port and implementation of the graphical interface for the source-level debugger has started. The graphical interface will be built upon the Galaxy windowing library.

Testing:

System-level Beta testing of the CNAPS-C compiler and the Control software has continued. The Control software has been changed to reflect the new ISA bus mapping of the CNAPS/PC board and is now being tested.

Testing of the command-line version of the source-level debugger has started. This software has been made available to several of Adaptive's customers for more extensive testing. As bugs are found they are fixed.

Issues and/or Concerns

None.

Plans For Next Reporting Period:

During the next three months work will continue on Phase 2 of the contract and the following are expected to be achieved:

1. Porting of the command-line version of the CNAPS source-level debugger will be completed. The debugger will be in Beta test.
2. Porting of the graphical version of the CNAPS source-level debugger will continue.

Handwritten notes and stamps in the bottom right corner, including "A-1" and "Special" with a checkmark.

The debugger will be ready for preliminary testing and bug fixing.

3. The new version of the CNAPS/PC board which solves the current incompatibilities with many PC motherboards and its Control Software will be completed. This new board and the Control Software will be in Beta test.

Fiscal Status:

Amount currently provided on contract: \$1,299,714.00

Expenditures and commitments to date: 366,495.00

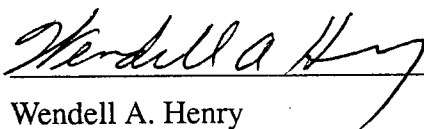
Funds required to complete work: \$933,219.00

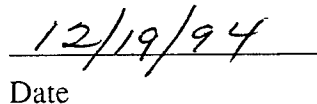
Authorized Phase funding: \$600,000.00

Expenditures and commitments to date: 366,495.00

Authorized Phase 1&2 funds remaining: \$233,505.00

At the time of this report, the project has expenditures and commitments totaling 61% of the funds allocated for Phases 1 and 2 of the contract.


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